

Appln No. 09/715,944
Amdt date May 11, 2006
Reply to Office action of January 11, 2006

REMARKS/ARGUMENTS

Claims 1-15, 17, 18, 20-21, and 23-26 were pending in this application when it was last examined by the Examiner. Claims 1, 3-5, 7-8, 10-11, 13-15, 23, and 25 have been amended. Claims 27-29 have been added. Claims 2, 6, 9, and 24 have been canceled. The amendments find full support in the original specification, claims, and drawings. No new matter has been added. This Amendment is being submitted with a Request for Continued Examination. Entry of the amendments and an early indication of allowance of the now-pending claims 1, 3-5, 7-8, 10-15, 17-18, 20, 23, 25, and 27-29 are respectfully requested.

In the final Office Action, claims 1-7, 9, 15, 21, 23, 24, and 26 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kitsukawa (U.S. Patent No. 6,282,713), in view of Rafey (U.S. Patent No. 6,452,598). Claim 8 was rejected under 35 U.S.C. 103(a) as being unpatentable over Kitsukawa and Rafey in view of Blacketter et al. (U.S. Patent No. 6,415,438). Claims 10-14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kitsukawa and Rafey in view of Moriyama (U.S. Patent No. 5,889,746). Claims 17, 18, 20, and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kitsukawa and Rafey in view of Jones et al. (U.S. Patent No. 6,317,774). Claims 2, 6, 9, 21, 24 and 26 have been canceled. Applicant respectfully traverses the rejection of the remaining claims.

Claim 1 has been amended to recite, among other things, "a tuner receiving a broadcast signal encoded with a plurality of mask data packets and a plurality of object data packets, each mask data packet corresponding to a particular video frame of a video program and including graphics data associated with a plurality of video objects in the particular video frame, the mask data packet including an identifier to an object mapping table included in a particular one of the plurality of object data packets, the object mapping table including an entry associated with each of the plurality of video objects in the particular video frame, each entry in the object mapping table referencing information data structures included in one or more of the plurality of object data packets, the information data structures including information for the corresponding video object." (Emphasis added). None of the cited references teach or suggest these limitations.

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Kitsukawa discloses an apparatus for providing on-demand electronic advertising information for items used in scenes of television programs. Although Kitsukawa discloses the use of "advertising marks" that may be superimposed over the program scene, nothing in Kitsukawa teaches or suggests that advertising marks "associated with a plurality of video objects in [a] particular video frame" are stored in a single "mask data packet," nor that a plurality of such mask data packets are received by the apparatus in Kitsukawa, "each mask data packet corresponding to a particular video frame of a video program."

Furthermore, nothing in Kitsukawa teaches or suggests each "mask data packet including an identifier to an object mapping table included in a particular one of the plurality of object data packets, the object mapping table including an entry associated with each of the plurality of video objects in the particular video frame." The Examiner contends that Kitsukawa teaches using a list of pointers for the addresses of advertising and coupon information. However, the use of pointers in general for accessing information stored in memory does nothing to teach or suggest a single "mask data packet" that contains the "graphics data associated with a plurality of video objects" that also contains the identifier of a single "object mapping table" where that object mapping table includes "an entry associated with each of the plurality of video objects in the particular video frame."

Claim 1, as amended, further recites:

- determining whether each of the plurality of video objects is visible in the particular video frame;
- for each video object determined to be visible in the particular video frame, overlaying the graphics image on the corresponding video object;
- receiving a user selection associated with one of the overlaid graphics images;
- retrieving the identifier of the object mapping table from the mask data packet corresponding to the particular video frame responsive to the user selection
- retrieving the object mapping table based on the retrieved identifier;
- locating the entry in the object mapping table for the video object associated with the user selection;
- identifying the information data structures referenced in the located entry;
- retrieving the information in the information data structures; and
- displaying the retrieved information on the display device.

Kitsukawa's apparatus fails to overlay a "graphics image on the corresponding video object" as is now required by claim 1.

Kitsukawa further fails to teach or suggest the recited "object mapping table" and the use of such "object mapping table" to retrieve information associated with particular video objects. In contrast, Kitsukawa simply teaches that "when a user wishes to display a form of the advertising data or coupon data on the screen, the CPU 29, accessing pointers stored in the SRAM 36, communicates to the transport IC 34 to retrieve the data from the data buffer (SRAM) 51 identified by the pointers. The CPU then formulates the format and other digital data which forms the associated information on the screen and forwards the data representative of the associated information to the transport IC 34 which forwards the data to the DRAM 25a of the MPEG video decoder 25 for subsequent output to the screen." (Col. 6, lines 8-17).

In addition, Kitsukawa fails to teach or suggest "determining whether each of the plurality of video objects is visible in the particular video frame," and "for each video object determined to be visible in the particular video frame, overlaying the graphics image on the corresponding video object." The Examiner agrees that Kitsukawa "is silent on determining whether the object is visible in the video and controls display of the associated graphics responsive to a determination that the video object is visible in the video frame." (final Office action, p. 3, lines 5-8). However, he relies on Rafey to make up for this deficiency.

Rafey discloses a system which enables video from a live broadcast to appear in an animated 3-D scene associated with the video content. (Col. 6, lines 62-66). Rafey discloses that this may be achieved by mapping video texture onto the 3-D scene. The video texture may be both plain video or a "shaped video." (Col. 7, lines 44-45). "Shaped video" allows special effects to be generated within a 3-D graphics scene. (Col. 10, lines 43-46). For example, "special effect signals (e.g., special effect media streams) are transmitted to provide shaped video footage (e.g, falling leaves, snow) . . . In another embodiment, shaped video is used to introduce characters as video in a 'virtual set' (e.g., video footage of narrators being inserted into a 3-D scene) that is controlled by the viewer." (Col. 16, lines 2-16).

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Rafey's generation of shaped video has nothing to do with overlaying a graphics image on the corresponding video object for allowing a user to interact with the graphics image. Thus, a person of skill in the art considering Rafey in combination with Kitsukawa would have no suggestion or motivation to apply Rafey's teachings for the purpose of having Kitsukawa's apparatus determine whether or not a graphics image with which one may interact should be overlaid on a video frame or not. The Examiner contends that motivation exists because "Rafey teaches that incorporating interactive graphics into the digital broadcast content greatly enriches the viewers' experience." (3/29/06 Advisory Action). However, Kitsukawa already incorporates interactive graphics. Nothing new is taught in Rafey that would give a person of skill in the art the specific motivation to modify Kitsukawa's system to determine the visibility of the video objects as is now claimed in claim 1.

Even if the combination of Rafey and Kitsukawa were proper, Rafey's disclosure of "shaped video" at most teaches that certain regions of a video footage may be made visible whereas other regions may not, all in the context of texture mapping for a 3-D scene. There is nothing in Rafey, however, that teaches or suggests overlaying any "graphics image" on a "video object" as is required by claim 1. Contrary to that, Rafey overlays videos onto a 3-D scene. Thus, even the combination of Kitsukawa fails to teach or suggest the limitations of claim 1. Accordingly, claim 1 is now in condition for allowance.

Independent claim 15 includes limitations that are similar to the limitations of claim 1 which make claim 1 allowable. Accordingly, claim 15 is also in condition for allowance.

Claims 3-5, 7-8, 10-14, 17-18, 20, 23, and 25 are also in condition for allowance because they depend on an allowable base claim, and for the additional limitations that they contain.

Claims 27-29 are new in this application. Claims 27-28 are in condition for allowance because they depend on an allowable base claim, and for the additional limitations that they contain. Claim 29 includes limitations that are similar to the limitations of claim 1 which make claim 1 allowable. Accordingly, claim 29 is also in condition for allowance.

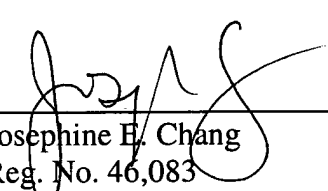
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In view of the above amendments and remarks, reconsideration and an early indication of allowance of the now pending claims 1, 3-5, 7-8, 10-15, 17-18, 20, 23, 25, and 27-29 are respectfully requested.

Respectfully submitted,

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